

CLAIMS

1. A method for controlling a tool selecting operation in a turret tool rest including a turret provided with a plurality of tool-mount portions at  
5 respective indexing angles in a circumferential direction, in which a rotating tool fitted to a certain tool-mount portion rotates in a passive manner in accordance with a turning indexing motion of said turret, said method comprising:

10 selecting whether a phase of a rotating motion of said rotating tool, fitted to said tool-mount portion of said turret, is adjusted to be identical in each time said rotating tool is disposed at an indexed position;

15 causing said turret to perform a turning indexing motion, when it is selected that said phase of said rotating motion of said rotating tool is adjusted to be identical, in such a manner that a cumulative sum of said turning indexing motion of said turret in a same  
20 turning direction is less than one rotation; and

causing said turret to perform a turning indexing motion, when it is selected that said phase of said rotating motion of said rotating tool is not  
25 adjusted to be identical, in such a manner that an individual turning indexing motion of said turret is at most half a rotation in any turning direction.

2. A method for controlling a tool selecting operation, as set forth in claim 1, wherein said  
30 plurality of tool-mount portions are respectively assigned tool numbers in ascending order along a certain turning direction; and wherein, in a case where said turret is caused to perform said turning indexing motion while ensuring said less than one rotation, a turning  
35 direction is determined by comparing a tool number of said tool-mount portion for a currently selected tool as being currently used with a tool number of said tool-mount portion for a next designated tool as to be

subsequently used, among all of said tools fitted to the turret.

5       3.    A method for controlling a tool selecting operation, as set forth in claim 1, wherein said rotating tool comprises a hob.

      4.    A method for controlling a tool selecting operation, as set forth in claim 1, wherein said rotating tool comprises a polygon cutter.

10       5.    A control device for carrying out a method for controlling a tool selecting operation as set forth in claim 1, said control device comprising:

          an input section for allowing an instruction regarding whether the phase of the rotating motion of said rotating tool is matched with a specified phase at an instant when said rotating tool fitted to said certain tool-mount portion of said turret is disposed at the indexed position by the turning indexing motion of said turret;

20       a drive control section for controlling said turning indexing motion of said turret; and

          a processing section for causing said drive control section to control said turning indexing motion in such a manner that, when it is instructed through said input section that the phase of the rotating motion of said rotating tool is matched, the cumulative sum of the turning indexing motion of said turret in the same turning direction becomes less than one rotation, and for causing said drive control section to control said turning indexing motion in such a manner that, when it is instructed through said input section that the phase of the rotating motion of said rotating tool is not matched, the individual turning indexing motion of said turret is at most half a rotation in any turning direction.